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Northern Arizona: Sound Change and Dialect Contact

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Introduction

Arizona, along with New Mexico, is situated in an interesting dialectological position: in between California and the Southern States. However, little work has been done on the vowels of Arizona English. This paper presents data on the realization of the TRAP vowel among 44 Arizonans recorded in 2002.

Linguistic Influences on Arizona

Our predictions of Arizonan vowel quality stem from knowledge of its settlement history, plus fieldwork in 2002 documenting related local origin discourses:

- First migration from the **South** (& the Midwest)
- Later from **California** (& the Northeast + Midwest)

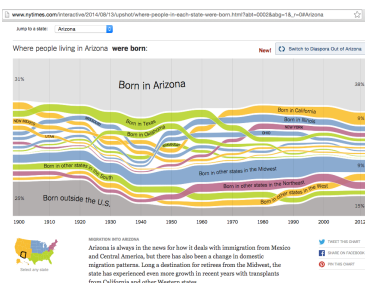


Figure 1: Settlement patterns into the state of Arizona over the 20th century (Source: NYT)

Hall-Lew (2004, 2005) argued that Arizona shows:

- a **Southern founder effect**, seen in rural areas
- a **growing Californian norm**, in urban centers

Previously observed (Hall-Lew 2004, 2005)

- Fronting of GOAT in Apparent Time, urban
- Fronting of GOOSE in Apparent Time, urban
- Fronted GOOSE by older speakers with cattle ranching affiliations (rural)

Current expectations:

- Fronting/raising of BAN in Apparent Time, urban
- Backing/lowering of TRAP in Apparent Time, urban
- No nasal split pattern (TRAP/BAN) among speakers with cattle ranching affiliation
- Overall fronter (more 'Southern') TRAP vowel for ranch speakers than urban

Note: all references are available upon request.

Methods

The demographic representation of the 44 speakers is not balanced:

Table 1: Speaker sample

	Town	YOB range	Ranch	YOB range
Female	13	1948-1983	1	1958
Male	22	1927-1984	8	1930-1983

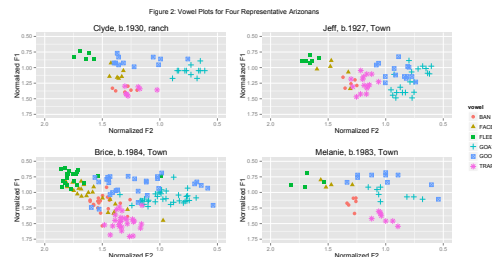
Therefore, two subsets of the data were analyzed separately:

- The FEMALE/MALE contrast is tested within the *town* group only.
- The TOWN/RANCH contrast is tested within the *male* group only.

8 linear mixed-effect models (SPEAKER & WORD as random intercepts)

- normalized (Fabricius et al. 2009) midpoint F1 and F2 values, BAN & TRAP vowels
- 8 models with following phonological environment (PLACE, MANNER) and YEAR-OF-BIRTH
 - 4 on the *town* subset with GENDER as a predictor
 - 4 on the *men* subset with TOWN/RANCH as a predictor

Results



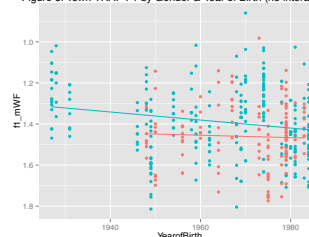
Note extent of GOOSE & GOAT fronting; TRAP/BATH distinction

Dataset	Vowel	Formant	Significant Fixed Effects
Town	TRAP	F1	MANNER, GENDER, YEAR-OF-BIRTH
Town	TRAP	F2	MANNER, GENDER
Town	BAN	F1	GENDER
Town	BAN	F2	YEAR-OF-BIRTH
Men	TRAP	F1	MANNER, YEAR-OF-BIRTH
Men	TRAP	F2	MANNER, TOWN/RANCH

Table 2: Significant predictors for each best-fit model

- Variation in BAN could not be modeled for the MEN subset.
- FOLLOWING MANNER was significant for TRAP in all models.
- FOLLOWING PLACE was never significant in any model.
- There were no interaction effects.

Figure 3: Town TRAP F1 by Gender & Year of Birth (no interaction)



Note: y-axis is reversed for F1; lower on the figure = a lower vowel

Figure 5: BAN F1 by Gender

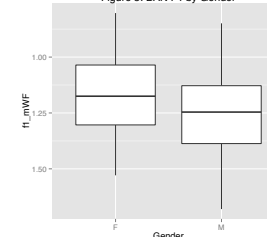


Figure 4: TRAP F2 by Gender & Town/Ranch (no interaction)

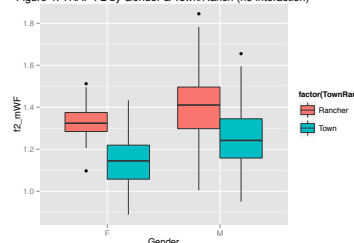
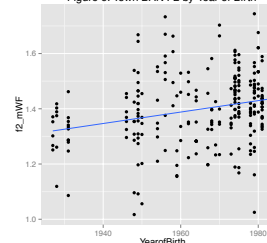


Figure 6: Town BAN F2 by Year of Birth



Discussion

- TRAP lowering and BAN fronting show **apparent-time correlations**, suggesting the presence of a nasal system. Women are leading in TRAP lowering.
- Women also favor a backer TRAP and a higher BAN than men, although neither variable shows an apparent-time correlation.
- TRAP F2 correlates with TOWN/RANCH, with **rancher men producing a fronter vowel than town men**. Qualitatively, this is also true for the age-matched subset of women.

Conclusion

- We take these results as additional evidence that Arizona in 2002 can be described as a site of dialect contact between **Californian** and **Southern Englishes**.

Future Directions: StoryCorps

We clearly need **data more recent than 2002**. To achieve this we have partnered with *StoryCorps, Inc.*, "a nationwide initiative to record and collect oral history interviews" which has provided our research team access to all of their Arizona-based interviews (N=318), recorded between 2006-2015. Analysis of those born and living in Flagstaff (N=6) is our next step.

StoryCorps interviews are typically conducted by a family member or close friend of the speaker. They also often naturally contain 'Danger of Death' questions, especially for interviews with older speakers. However, the prestige and high public profile of StoryCorps also means that the speaker's style is sometimes very self-conscious. Each interview has a different interviewer.